



# UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE  
United States Patent and Trademark Office  
Address: COMMISSIONER FOR PATENTS  
P.O. Box 1450  
Alexandria, Virginia 22313-1450  
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
-----------------	-------------	----------------------	---------------------	------------------

10/658,290

09/10/2003

Yoshiteru Hattori

117121

2464

25944

7590

10/08/2004

OLIFF & BERRIDGE, PLC

P.O. BOX 19928

ALEXANDRIA, VA 22320

EXAMINER

CHEN, SOPHIA S

ART UNIT

PAPER NUMBER

2852

DATE MAILED: 10/08/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

AK

<b>Office Action Summary</b>	<b>Application No.</b> 10/658,290	<b>Applicant(s)</b> HATTORI ET AL.	
	<b>Examiner</b> Sophia S. Chen	<b>Art Unit</b> 2852	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 2 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☐ Responsive to communication(s) filed on \_\_\_\_.
- 2a) ☐ This action is **FINAL**.                      2b) ☐ This action is non-final.
- 3) ☒ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-10 is/are pending in the application.  
4a) Of the above claim(s) \_\_\_\_ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 1-10 is/are allowed.
- 6) ☐ Claim(s) \_\_\_\_ is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 10 September 2003 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).  
a) ☒ All    b) ☐ Some \*    c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- |   |   |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)   | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. ____. |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)  | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)             |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date <u>9/10/03, 3/25/04</u> . | 6) <input type="checkbox"/> Other: ____.  |

## DETAILED ACTION

### *Ex parte Quayle*

1. This application is in condition for allowance except for the following formal matters:

#### ***Drawings***

2. The drawings are objected to as failing to comply with 37 CFR 1.84(p)(5) because they include the following reference character(s) not mentioned in the description: 43a (Figs. 2 and 3), 43b (Figs. 2 and 3), R (Fig. 2), 58 (Fig. 3), 46a (Fig. 3), 60 (Figs. 4 and 5), and 61 (Fig. 4). Corrected drawing sheets in compliance with 37 CFR 1.121(d), or amendment to the specification to add the reference character(s) in the description in compliance with 37 CFR 1.121(b) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. The replacement sheet(s) should be labeled "Replacement Sheet" in the page header (as per 37 CFR 1.84(c)) so as not to obstruct any portion of the drawing figures. If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

3. The drawings are objected to as failing to comply with 37 CFR 1.84(p)(5) because they do not include the following reference sign(s) mentioned in the description: 43 (page 15, line 6, etc.). Corrected drawing sheets in compliance with 37

CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. The replacement sheet(s) should be labeled "Replacement Sheet" in the page header (as per 37 CFR 1.84(c)) so as not to obstruct any portion of the drawing figures. If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

4. The drawings are objected to because the reference numeral "4" in Figure 2 should be labeled as "4c". Corrected drawing sheets in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. The figure or figure number of an amended drawing should not be labeled as "amended." If a drawing figure is to be canceled, the appropriate figure must be removed from the replacement sheet, and where necessary, the remaining figures must be renumbered and appropriate changes made to the brief description of the several views of the drawings for consistency. Additional replacement sheets may be necessary to show the renumbering of the remaining figures. The replacement sheet(s) should be labeled "Replacement Sheet" in the page header (as per 37 CFR 1.84(c)) so as not to obstruct any portion of the drawing figures. If the changes are not accepted by the

examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

***Specification***

5. The title of the invention is not descriptive. A new title is required that is clearly indicative of the invention to which the claims are directed.

6. The disclosure is objected to because of the following informalities:

- a. Page 10, line 10, "14" should be labeled as "13".
- b. Page 10, line 13, "4a" should be labeled as "4c".
- c. Page 12, line 23, "16" should be labeled as "17".
- d. Page 16, line 9, "2a" should be deleted.

Appropriate correction is required.

7. The lengthy specification has not been checked to the extent necessary to determine the presence of all possible minor errors. Applicant's cooperation is requested in correcting any errors of which applicant may become aware in the specification.

Prosecution on the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

A shortened statutory period for reply to this action is set to expire **TWO MONTHS** from the mailing date of this letter.

***Information Disclosure Statement***

8. The information disclosure statement (IDS) submitted on 9/30/03 is being considered by the examiner. The examiner crosses out the first listed document because the Attorney Docket Number does not provide sufficient/appropriate information. Moreover, no copy is provided for examiner to review.

***Allowable Subject Matter***

9. Claims 1-10 are allowed.

10. The following is a statement of reasons for the indication of allowable subject matter: Claim 1 is considered to be allowable because the prior art of record does not teach or suggest all the limitations of: an exposure unit disposed above the image forming unit, a main control board placed substantially vertically on the side of the first side frame, a power board placed substantially horizontally on the side of the second side frame, and an engine control board placed substantially horizontally closer to the first side frame than the power board.

***Citation of Pertinent Prior Art***

11. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Setoriyama (US Pat. No. 5,561,499) discloses an image forming apparatus comprising an image forming unit; an exposure unit disposed above the image forming

unit; an image process circuit board placed substantially vertically; and a high voltage power source and a control section being placed on an electrical equipment unit.

Azuma et al. (US Pat. No. 5,907,745) discloses an image forming apparatus comprising an image forming unit; an exposure unit disposed above the image forming unit; and a controller, an AC input portion, a high voltage generating means and a motor being placed on a base.

Yoshihara et al. (US Pat. Pub. No. US 2004/0096229 A1) discloses an image forming apparatus comprising an image forming unit; an exposure unit disposed above the image forming unit; and an engine control board, a high-voltage power source circuit board, and a low-voltage power source circuit board all being placed horizontally below the image forming unit.

Yamanaka (US Pat. No. 6,778,197 B2) discloses an image forming apparatus comprising an image forming unit; a scanner unit disposed above the image forming unit; an engine driving circuit board being arranged substantially vertically along a side of the apparatus main body on the opposite side of a driving unit; an engine control circuit boards being arranged in a planar state substantially horizontally above the scanner unit; and an image controller board being arranged substantially vertically along a side of the apparatus main body on the driving unit side.

Ariga (JP 08-006472) discloses an image forming apparatus comprising an image forming unit; an exposure unit disposed above the image forming unit; a first control circuit board; and a second control circuit board.

Setoriyama (JP 2001-290323) discloses an image forming apparatus comprising an image forming unit; an exposure unit disposed above the image forming unit; an image process circuit board placed substantially vertically; and a high voltage power source and a control section being placed on an electrical equipment unit.

***Examiner's Comment***

12. In the Communication from the European Patent Office dated 3/1/04 indicates two "Y" references, JP 11-341203 and EP 1 089 142. The examiner believes there is no motivation to combine these two references at least for the following reasons. (1) There is no motivation to apply the exposure unit above the image forming unit as taught by EP 1 089 142 in place of the exposure unit of JP 11-341203 because it involves a major rearrangements. If the exposure unit is placed above the image forming unit of JP 11-341203, the paper path has to be placed below the image forming unit in order not to block the exposure light. The overall structure will be changed. (2) If the structure/position of the control board of EP 1 089 142 is replaced with the structure/position of the boards of JP 11-341203, the new structure will affect the air flow inside the machine. One side frame of JP 11-341203 discloses a fan, and the other side frame of JP 11-341203 discloses suction apertures. There is no motivation to put any board vertically along either one of the side frames.




**Contact Information**

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Sophia S. Chen whose telephone number is (703) 308-7617. The examiner can normally be reached on M-F (7:00-3:00) First Friday Off.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Arthur Grimley can be reached on (703) 308-1373. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

  
Sophia S. Chen  
Primary Examiner  
Art Unit 2852

Ssc  
October 6, 2004